

## **WHAT IS CLAIMED IS:**

1. An apparatus for storing energy for subsequent use in electrical or physical power generation, comprising a semi spheric liquid phase flywheel connected by a mechanical means to a shaft aligned along the rotational axis of the flywheel.
2. The liquid phase flywheel according to claim 1, in which a semi spheric structure acts as the flywheel shell and fluid container.
3. The liquid phase flywheel according to claim 2, in which a semi spheric structure made of a composite material acts as the flywheel shell and fluid container.
4. The liquid phase flywheel according to claim 2 and 3, wherein a perforated radial vein cluster is bonded to the inner surface of the semispheric structure.
5. The liquid phase flywheel according to claim 4, wherein a porous matrix is placed between the internal vanes.
6. The liquid phase flywheel according to claims 1, 2, 3 or 4 wherein small round or viscous particles are used in place of a fluid.

7. The liquid phase flywheel according to claim 1 wherein the liquid phase flywheel is fitted with electrically conducting elements which, in rotating through a magnetic field, result in the generation of electrical power.

8. The liquid phase flywheel according to claim 2 wherein the liquid phase flywheel is fitted with electrically conducting elements which, in rotating through a magnetic field, result in the generation of electrical power.

9. The liquid phase flywheel according to claim 3, wherein the liquid phase flywheel is fitted with electrically conducting elements which, in rotating through a magnetic field, result in the generation of electrical power.

10. The liquid phase flywheel according to claim 4, wherein the liquid phase flywheel is fitted with electrically conducting elements which, in rotating through a magnetic field, result in the generation of electrical power.

11. The liquid phase flywheel according to claim 5 wherein the liquid phase flywheel is fitted with electrically conducting elements which, in rotating through a magnetic field, result in the generation of electrical power.

12. The liquid phase flywheel according to claim 6 wherein the liquid phase flywheel is fitted with electrically conducting elements which, in rotating through a magnetic field, result in the generation of electrical power.

13. A method for storing energy for subsequent use in electrical or physical power generation comprising a liquid phase flywheel connected by a mechanical means to a shaft aligned along the rotational axis of the flywheel.

14. A method for storing energy for a subsequent use in electrical or physical power generation according to claim 13 in which a semi spheric structure acts as the flywheel shell and fluid container.

15. A method for storing energy for a subsequent use in electrical or physical power generation according to claim 14 in which a semi spheric structure made of a composite material acts as the flywheel shell and fluid container.

16. A method for storing energy for a subsequent use in electrical or physical power generation according to claim 14 or 15 in which a perforated radial vein cluster is bonded to the inner surface of the semispheric structure.

17. A method for storing energy for a subsequent use in electrical or physical power generation according to claim 16 wherein a porous matrix is placed between the internal vanes.

18. A method for storing energy for a subsequent use in electrical or physical power generation according to claim 13, 14, 15, 16, or 17 wherein small round or viscous particles are used in place of a fluid.

19. A method for storing energy for a subsequent use in electrical or physical power generation according to claims 13, 14, 15, 16, 17, or 18 wherein the rotating device is fitted with electrically conducting elements which, in rotating through a magnetic field, result in the generation of electrical power.

20. A method for storing energy for a subsequent use in electrical or physical power generation according to claims 1, 2, 3, 4, 5, or 6 wherein the rotating device is attached by mechanical means to a means of generating electrical power.

21. A method according to claims 1, 2, 3, 4, 5, of 6 in which rotational energy is translated to physical work through direct mechanical coupling means to the rotating shaft.

22. A method according to claims 1, 2, 3, 4, 5 or 6 in which rotational energy is translated to physical work through indirect magnetic coupling means to the rotating shaft.

23. A method for storing energy for a subsequent use in electrical or physical power generation according to claims 1, 2, 3, 4, 5, or 6 in which rotational energy is translated to

electrical energy through indirect magnetic coupling means to a means of generating electrical power.